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EXAMINER	
SALL, EL HADJI MALICK	

ART UNIT	PAPER NUMBER
2157	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/611,491	HORVITZ, ERIC J.	
	Examiner	Art Unit	
	El Hadji M. Sall	2157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 October 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-12,14-27 and 30-58* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-12,14-27 and 30-58* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10/24/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This action is responsive to the request for continued examination filed on October 31, 2007. Claims 13 and 59-62 are cancelled. Claims 1 and 58 are amended. Claims 1, 3-12, 14-27 and 30-58 are pending. Claims 1, 3-12, 14-27 and 30-58 represent bounded-deferral policies for guiding the timing of alerting, interaction and communications using local sensory information.

2. Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claim 1 recites "the inference is based at least upon based upon consideration..." in lines 3-4. It is not clear to Examiner what Applicant means. Appropriate correction is required.

For purpose of prior art rejection, Examiner will construe it as "the inference is based at least upon consideration...".

Claims 1 and 58 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

Claim 58 recites the limitation "at least t deadline..." in lines 24-25. This limitation is not clear to Examiner. Appropriate correction is required.

3. ***Allowable Subject Matter***

Claim 58 is objected to because of informality addressed in the objection above. They will be allowed if appropriate correction is made

4. ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claim 27 is rejected under 35 U.S.C. 102(e) as being anticipated by Heinzel et al. U.S. 20040225718.

Heinzel teaches the invention as claimed including alert notification engine (see abstract).

As to claim 27, Heinzel teaches a system that facilitates conveying notifications, comprising:

a device that is associated with a user, the device gathers data related to at least one of an attentional state of the user and location of the user (paragraph [0007]);and

a notification component that employs at least a portion of the gathered data and bounded deferral data in connection with providing a notification, the bounded deferral data is determined in consideration of a tolerated period that is a function of at least one of a notification sender and a type and/or content of message delivered (paragraphs [0112-0113]).

6. Claim 57 is rejected under 35 U.S.C. 102(e) as being anticipated by Emens U.S. 6,591,279.

Emens teaches the invention as claimed including system and method for computer based notifications of real-world events using digital images (see abstract).

As to claim 57, Emens teaches a system that facilitates communications, comprising:

means for sensing a state of a user (figure 1);

means for determining a bounded deferred period that relates to a deadline for conveying information of value to a user (column 2, lines 42-45, Emens discloses he digital image provides a visual record of the event being monitored by the sensor and the image is transmitted to the user with the notification message (i.e. "conveying information of value to a user") when the sensor indicates that the event has occurred (i.e. " means for determining bounded deferred period that relates to a deadline"); and

means for employing the sensed state in connection with conveying a notification to the user (figure 1).

7. Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1, 3-4, 7, 8, 15, 17-19, 21-46 and 48-56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heinzel et al. U.S. 20040225718 in view of Robarts et al. U.S. 7,073,129.

Heinzel teaches the invention substantially as claimed including alert notification engine (see abstract).

As to claim 1, Heinzel teaches a system that facilitates conveying notifications, comprising:

a resolution component to determine a time period to deliver the message, the time period is a bounded deferred period between the time the message is obtained and a deadline for making a user aware of the message contained information of value to the user (paragraph [0112]); and

a notification component that conveys the information based at least in part upon endpoint sensing of at least one device and the bounded deferral period (paragraphs [0112-0113]).

Heinzel fails to teach explicitly a prioritization component that infers an urgency of an obtained message, the inference is based at least upon consideration of a message sender, a message type, content, or a combination thereof; and deliver the message based upon the urgency of the obtained message.

However, Robarts teaches automated selection of appropriated information based on a computer user's context. Robarts teaches a prioritization component that infers an urgency of an obtained message, the inference is based at least upon consideration of a message sender, a message type, content, or a combination thereof; and deliver the message based upon the urgency of the obtained message (column 13, lines 23-59).

It would have been obvious to one of ordinary skill in the at the time the invention was made to combine Heinzel in view of Robarts to provide a prioritization component that infers an urgency of an obtained message, the inference is based at least upon consideration of a message sender, a message type, content, or a combination thereof; and deliver the message based upon the urgency of the obtained message, and the bound deferral period depends on the urgency of the information. One would be motivated to do so to allow quick response to emergency.

As to claim 4, Heinzel teaches the system of claim 1, the bounded deferral is associated with at least one of sensors, calendar information, an alerting type and a time of day to determine whether a user is too busy to receive an alert currently or in a predetermined time in the future (paragraph [0005]; paragraph 0042).

As to claim 7, Heinzel teaches the system of claim 4, the sensors determine a user current cost of interruption or state of busy-ness (paragraph [0027]).

As to claim 8, Heinzel teaches the system of claim 4, the sensors determine when a user available to receive information (paragraph [0029]).

As to claim 13, Heinzel teaches the system of claim 2, further comprising a prioritization system, wherein the bounded deferral period is a function of an inferred urgency or priority of a message (paragraph [0066]).

As to claim 15, Heinzel teaches the system of claim 14, further comprising a deferral period until a user looks away from an item of importance absorbing the user's attention (paragraph [0061]; figures 8-12).

As to claim 17, Heinzel teaches the system of claim 1, further comprising a component that causes bounded deferral and transmission reliability to interact (figure 2).

As to claim 18, Heinzel teaches the system of claim 17, further comprising a component to determine if a transmission reliability has reached a threshold before a deferral tolerance is reached, a user can be notified via a first type of alert while bypassing a second type of alert (paragraph [0005]).

As to claim 19, Heinzel teaches the system of claim 1, the bounded deferral period is applied to putting a caller on hold and enabling a break through over a

predetermined time horizon (paragraph [0102]).

As to claims 21 and 22, Heinzel teaches the system of claim 1, further comprising bounded deferral policies that are coordinated with other parameters, and the other parameters are related to a user's location and/or context. (paragraph [0006]; paragraph [0024]).

As to claim 23, Heinzel teaches the system of claim 1, further comprising tasks of predetermined length that are available in contexts where a user is reviewing media (figure 5).

As to claim 24, Heinzel teaches the system of claim 1, further comprising global bounded deferral policies that are viewed as approximation of more detailed decision-theoretic analyses (paragraph [0044]).

As to claim 25, Heinzel teaches the system of claim 1, further comprising a component to provide low time criticality messages during a breakthrough period of another message (figure 6).

As to claim 26, Heinzel teaches the system of claim 2, when a bounded deferral policy has been reached, an endpoint device can be instructed to send a message back to a central notification manager or a sender of an alert, informing the central notification

manager that the endpoint device is unsuccessful at relaying a message (paragraph [0098]).

As to claim 38, Heinzel teaches the system of claim 27, the device is associated with one or more application models (paragraph [0005]).

As to claim 48, Heinzel teaches the system of claim 27, at least one of the devices and the notification component determines at least one of attention-sensitive costs of disruption, a value of information, a loss based in decreased fidelity, and a transmission reliability associated with the use of an alerting modality of the device (paragraph [0005]).

As to claim 49, Heinzel teaches the system of claim 48, the transmission reliability of the device is represented as a probability p, p(transrel.vertline.context), that is the likelihood of getting through on the device given context, the context is a function, f(context) or f(sensed states) (figure 6; figure 1).

As to claims 50, 51, 52 and 53, Heinzel teaches the system of claims 27, 50, 50 and 52, respectively, further comprising a subscription service provided at a notification source that enables users to tag notifications according to a predefined priority, the predefined priority is assigned based upon a happening of a condition, further comprising a subscription user interface to enable users to configure attributes of a

notification, and the attributes are defined in a notification schema (paragraph [0043]; paragraph [0066]; paragraph [0010]; paragraph [0055]).

As to claims 54 and 55, Heinzel teaches the system of claims 27 and 54, respectively, further comprising a prioritization system that automatically assigns priorities to the notification, and a max deferral setting that is associated with a notification priority to enable at least one of a delivery of the notification at a time-out of the max deferral, and deferral of the notification to a likely available free state (paragraph [0066]).

As to claim 59, Heinzel teaches the method of claim 58, further comprising employing a decision model in connection with the decision-making, the decision model includes processing of at least one of a value of actions and a cost of actions to determine an expected utility regarding conveying the notification to the user (figure 1).

As to claims 60, 61 and 62, Heinzel teaches the method of claim 59, the value of actions and cost of actions are determined in part from a consideration of the user's attentional focus and workload, the user's attentional focus and workload is determined in part by a consideration of at least one of perceptual sensors, device interactions, a calendar, a day, and a time, and the attentional state and/or location of the user is determined from a temporal decision model (figure 3; paragraph [0005]).

9. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heinzel et al. U.S. 20040225718 in view of Maruyama et al. U.S. 2003004635.

Heinzel teaches the invention substantially as claimed including alert notification engine (see abstract).

As to claims 5 and 6, Heinzel teaches the system of claims 4 and 5, respectively.

Heinzel fails to teach explicitly policies for processing a deadline associated with conveying notifications, and if the deadline is reached and an alert has not yet been delivered, the alert is delivered at the deadline; if a deadline will pass and there is no purpose in waiting, then the alert is passed immediately.

However, Maruyama teaches document management system. Maruyama teaches policies for processing a deadline associated with conveying notifications, and if the deadline is reached and an alert has not yet been delivered, the alert is delivered at the deadline; if a deadline will pass and there is no purpose in waiting, then the alert is passed immediately (paragraph [0009]; paragraph [0083-0084]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Heinzel in view of Maruyama to provide policies for processing a deadline associated with conveying notifications, and if the deadline is reached and an alert has not yet been delivered, the alert is delivered at the deadline; if a deadline will pass and there is no purpose in waiting, then the alert is passed

immediately. One would be motivated to do so to allow reminding the department using the mailing means (abstract).

10. Claims 9, 10, 14, 16, 20 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heinzel et al. U.S. 20040225718 in view of Emens et al. U.S. 6,591,279.

Heinzel teaches the invention substantially as claimed including alert notification engine (see abstract).

As to claims 9, 10, 14 and 16, Heinzel teaches the system of claims 3, 9, 1 and 9, respectively.

Heinzel fails to teach explicitly sensors that determine information relating to the transmission reliability, the sensor information is passed to a central notification manager that is deliberating about where to send messages, or an endpoint device computes the transmission reliability from related sensors and passes the transmission reliability to the central notification manager, a gaze sensor to determine when a user observes a display, and the sensors compute a transmission reliability based on at least one of heat, motion, acoustical information, and wireless information.

However, Emens teaches system and method for computer-based notifications or real-world events using digital images. Emens teaches sensors that determine information relating to the transmission reliability, the sensor information is passed to a

central notification manager that is deliberating about where to send messages, or an endpoint device computes the transmission reliability from related sensors and passes the transmission reliability to the central notification manager, and gaze sensor, and the sensors compute a transmission reliability based on at least one of heat, motion, acoustical information, and wireless information (column 2, line 59 to column 3, line 9; column 1, line 49 to column 2, line 2).

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine Heinzel in view of Emens to provide sensors that determine information relating to the transmission reliability, and the sensor information is passed to a central notification manager that is deliberating about where to send messages, or an endpoint device computes the transmission reliability from related sensors and passes the transmission reliability to the central notification manager, a gaze sensor to determine when a user observes a display, and the sensors compute a transmission reliability based on at least one of heat, motion, acoustical information, and wireless information. One would be motivated to do so to allow transmitting a notification message to one of the client computers (abstract).

As to claim 20, Heinzel teaches the system of claim 19.

Heinzel fails to teach explicitly the bonded deferral is applied by an endpoint device or by a standard communications system connected to sensors.

However, Emens teaches sensors (figure 1, item 120).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to combine Heinzel in view of Emens to provide the bonded deferral is applied by an endpoint device or by a standard communications system connected to sensors. One would be motivated to do so to allow notifying the proxy server that a real world event has occurred (abstract).

As to claim 47, Heinzel teaches the system of claim 38.

Heinzel fails to teach explicitly the application models employ at least one of a Global Positioning System (GPS), an 802.11 signal strength sensor, an infrared proximity sensors, and a touch sensor.

However, Emens teaches sensors (figure 1, item 120).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Heinzel in view of Emens to provide the application models employ at least one of a Global Positioning System (GPS), an 802.11 signal strength sensor, an infrared proximity sensors, and a touch sensor. One would be motivated to do so to allow notifying the proxy server that a real world event has occurred (abstract).

11. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heinzel et al. U.S. 20040225718 in view of Gusler et al. U.S. 20050050143.

Heinzel teaches the invention substantially as claimed including alert notification engine (see abstract).

As to claims 11 and 12, Heinzel teaches the system of claims 1 and 11, respectively.

Heinzel fails to teach explicitly the bounded deferral period is employed to allow a system to take dialog initiative in a conversational application, and the application at least one of initiates a conversation or continues a conversation that has been interrupted by a user's attention being diverted elsewhere for a task or another conversation.

However, Gusler teaches method and apparatus for enhancing instant messaging systems. Gusler teaches the bounded deferral period is employed to allow a system to take dialog initiative in a conversational application, and the application at least one of initiates a conversation or continues a conversation that has been interrupted by a user's attention being diverted elsewhere for a task or another conversation (paragraph [0009]).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Heinzel in view of Gusler to provide the bounded deferral period is employed to allow a system to take dialog initiative in a conversational application, and the application at least one of initiates a conversation or continues a conversation that has been interrupted by a user's attention being diverted elsewhere for a task or another conversation. One would be motivated to do so to allow instant messaging session (abstract).

Claims 30-37, 39-46 and 56 do not teach or define any new limitations above claims 1-27, 38 and 47-55 and 57 and therefore are rejected for similar reasons.

12. Conclusion

Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention

Any inquiry concerning this communication or earlier communications from the examiner should be directed to El Hadji M Sall whose telephone number is 571-272-4010. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on 571-272-4001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-

8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

El Hadji Sall
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